

BROOKHAVEN NATIONAL LABORATORY

MEMORANDUM

DATE: April 8, 1997  
TO: N. Gmur  
FROM: G. Schroeder *GS*  
SUBJECT: SDL NESHAPs Review

This memo serves to document the status of the Source Development Laboratory (SDL) with respect to compliance with the requirements of 40 CFR 61, Subpart H, "National Emission Standards for Hazardous Air Pollutants." A NESHAPs review of this facility was completed in December 1992 when the facility was still designated as the "200 MeV Linear Electron Accelerator Injector." It is now identified as the Source Development Laboratory (SDL).

There will be no open air path for the accelerated beam. The only potential source for the production of air activation products will be by way of nominal beam losses and resultant secondary radiation. In the 1992 review, it was estimated under conservative assumptions that annual airborne emissions from this facility would include 220 mCi of nitrogen-13 ( $t_{1/2} = 10$  minutes) and 23 mCi of oxygen-15 ( $t_{1/2} = 2$  minutes). Total effective dose equivalent to the maximally exposed individual was projected to be  $6 \times 10^{-5}$  mrem, far below the 0.1 mrem/yr level at which formal permitting would be required. Based on conversations that I had with you and Erik Johnson on April 7, the total charge to be accelerated by the SDL unit will be even less than originally expected, leading to a lower total emissions potential.

As we discussed, the SDL as reviewed is in its "Phase I" configuration. It is expected that the unit will also have Phase II and III configurations under which different pieces of equipment will be added or removed. It is not anticipated that any future Phase II or III modifications will significantly alter the extremely low emissions potential for this facility. Therefore, the conclusions of this assessment will remain valid.

GS/rt

cc: G. Granzen, DOE  
B. Royce  
H. Schulman  
O. White

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